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Please type a plus sign (+) inside this box → ☒PTO/SB/05 (1/98)  
Approved for use through 09/30/2000. OMB 0651-0032  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	99108
First Inventor or Application Identifier	Hans Loschner, et al
Title	PARTICLE MULTIBEAM LITHOGRAPHY
Express Mail Label No.	EM 311373633 US

**APPLICATION ELEMENTS**  
See MPEP chapter 600 concerning utility patent application contents.**ADDRESS TO:** Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

1. ☒ \* Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original, and a duplicate for fee processing)
2. ☒ Specification [Total Pages **21**]  
(preferred arrangement set forth below)
- Descriptive title of the Invention
  - Cross References to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to Microfiche Appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets **6**]
4. Oath or Declaration [Total Pages **27**]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))  
(for continuation/divisional with Box 17 completed)  
[Note Box 5 below]
- i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting  
inventor(s) named in the prior application:  
see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference (useable if Box 4b is checked)  
The entire disclosure of the prior application, from which a  
copy of the oath or declaration is supplied under Box 4b, is  
considered to be part of the disclosure of the accompanying  
application and is hereby incorporated by reference therein.

6. ☐ Microfiche Computer Program (Appendix)
7. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
- a. ☐ Computer Readable Copy
- b. ☐ Paper Copy (identical to computer copy)
- c. ☐ Statement verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

8. ☒ Assignment Papers (cover sheet & document(s))
9. ☐ 37 C.F.R. § 3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)
10. ☐ English Translation Document (if applicable)
11. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
14. ☒ \* Small Entity Statement(s) ☐ Statement filed in prior application,  
(PTO/SB/09-12) Status still proper and desired
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☒ Other: Applicant hereby petitions for an  
extension of time whenever such a  
petition is required
- \* A new statement is required to be entitled to pay small entity fees, except  
where one has been filed in a prior application and is being relied upon.

**17. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:**☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: \_\_\_\_\_

Prior application information: Examiner \_\_\_\_\_ Group / Art Unit: \_\_\_\_\_

**18. CORRESPONDENCE ADDRESS**☐ Customer Number or Bar Code Label: \_\_\_\_\_ or ☐ Correspondence address below  
(Insert Customer No. or Attach bar code label here)

Name	Thomas R. Vigil				
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	Suite E1				
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Name (Print/Type)	Thomas R. Vigil	Registration No. (Attorney/Agent)	24,542
Signature	<i>Thomas R. Vigil</i>	Date	8/17/99

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PATENT

USSN - New US Pat. Appl.

Atty Docket 99108

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

New patent application:

           Regular  
  x   Convention  
           File Wrapper Continuation  
           Divisional/Continuation  
           Continuation-in-part  
           Reissue Application  
           PCT National Phase  
           PCT Application  
           Continuation of PCT No.                     

Applicant (s) :

Hans Loschner, Gerhard Stengl and  
 Herbert Vonach

Serial No.

Title:

Particle Multibeam Lithography

CERTIFICATE OF EXPRESS MAIL DEPOSIT

"Express Mail" Mailing Label No. EM 311373633 US

Date of Deposit: August 17, 1999

I hereby certify that this paper, or fee, is being deposited with the U.S. Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Thomas R. Vigil

(Typed or printed name of person mailing fee or paper)

Thomas R. Vigil  
 (Signature of person mailing paper of fee)

The documents enclosed with and being filed with this paper are:

  x   application transmittal letter  
  x   Patent application:  
       16   pages of specification  
         4   pages of claims containing   28   claims  
       x   Abstract of the Disclosure  
         6   sheets of drawings containing   8   FIG's.  
       x   executed Declaration and Power of Attorney  
     ~~from parent application~~  
                specification and claims in foreign language  
                PCT Article 19 Amendment  
                translation of PCT article 19 Amendment  
       x   Assignment & Patent Assignment Recordation Cover Sheet  
       x   Small Entity Declaration (s) (two)  
                translation of amended specification and/or claims  
  x   Check (s) in the amounts of: \$452.00 and \$40.00  
           Petition for Extension of Time in prior Application  
           Serial No.                      for            month (s)  
           Preliminary Amendment Before Action  
           Disclosure Statement including USPTO Form 1449 and  
     copies of            reference (s)  
           Letter re application being filed with no filing fee  
     and no executed Declaration

PTO/SB/10 (12-97)  
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**STATEMENT CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) & 1.27(c))—SMALL BUSINESS CONCERN**

Docket Number (Optional)  
99108

Applicant, Patentee, or Identifier: Hans Ioschner, Gerhard Stengl and Herbert Vonach

Application or Patent No.: \_\_\_\_\_

Filed or Issued: August 17, 1999

Title: ~~MULTIBEAM~~ PARTICLE MULTIBEAM LITHOGRAPHY

I hereby state that I am

- ☐ the owner of the small business concern identified below:  
☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN IMS Ionen-Mikrofabrikations Systeme GmbH

ADDRESS OF SMALL BUSINESS CONCERN Schreygasse 3  
1020 Vienna, AUSTRIA

I hereby state that the above identified small business concern qualifies as a small business concern as defined in 13 CFR Part 121 for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time, or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby state that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

- ☒ the specification filed herewith with title as listed above.  
☐ the application identified above.  
☐ the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern, or organization having rights in the invention must file separate statements as to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

- Each person, concern, or organization having any rights in the invention is listed below:  
☐ no such person, concern, or organization exists.  
☐ each such person, concern, or organization is listed below.

Separate statements are required from each named person, concern or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

NAME OF PERSON SIGNING MAX BAYERL

TITLE OF PERSON IF OTHER THAN OWNER CEO

ADDRESS OF PERSON SIGNING SEE ABOVE (IMS)

SIGNATURE *Max Bayerl* DATE Aug 17, 1999

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Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**STATEMENT CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) & 1.27(b))--INDEPENDENT INVENTOR**

Docket Number (Optional)

99108

Applicant, Patentee, or Identifier: Hans Loschner, Gerhard Stengl and Herbert Vonach

Application or Patent No.: \_\_\_\_\_

Filed or Issued: August 17, 1999

Title: PARTICLE  
MULTIBEAM LITHOGRAPHY

As a below named inventor, I hereby state that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees to the Patent and Trademark Office described in:

- ☒ the specification filed herewith with title as listed above.  
☐ the application identified above.  
☐ the patent identified above.

I have not assigned, granted, conveyed, or licensed, and am under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☐ No such person, concern, or organization exists.  
☒ Each such person, concern, or organization is listed below.

IMS Ionen-Mikrofabrikations Systeme GmbH  
Schreygasse 3  
1020 Vienna, AUSTRIA

Separate statements are required from each named person, concern, or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

Hans Loschner  
NAME OF INVENTOR

Hans Loschner  
Signature of inventor

Aug 6, 1999  
Date

Gerhard Stengl  
NAME OF INVENTOR

Gerhard Stengl  
Signature of inventor

Aug 17, 1999  
Date

Herbert Vonach  
NAME OF INVENTOR

Herbert Vonach  
Signature of inventor

Aug 17, 1999  
Date

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Application for Letters Patent  
of the UNITED STATES OF AMERICA by -

(1) Hans Löschner  
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Being a citizen of - AUSTRIA

(2) Gerhard Stengl  
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(3) Herbert Vonach  
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Klosterneuburg 3400, AUSTRIA  
Being a citizen of - AUSTRIA

For:

PARTICLE MULTIBEAM LITHOGRAPHY

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority from Austrian  
Patent Application No. A 1415/98 filed August  
19, 1998